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EXAMINER	
DUONG, FRANK	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/643,920	TACKIN ET AL.	
	Examiner	Art Unit	
	Frank Duong	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-110* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-110* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4,5,7,8*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to the communication dated 08/23/00 and Preliminary Amendment dated 08/20/02. Claims 1-110 are pending in the application.

Information Disclosure Statement

2. The information disclosure statements filed 02/17/04, 08/20/02, 08/07/01 and 09/28/00 comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. They have been considered and placed in the application file.

The information disclosure statement (IDS) filed 08/30/02 is considered as following:

The listed US patents are considered.

The Foreign Patent Documents and Others are not considered due to the Applicants fail to provide copies of listed documents.

The IDS has been placed in the application file, but the information referred to therein (Foreign Patent Documents and Others) has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Objections

3. Claims 1 and 49 are objected to because of the following informalities:

As per claim 1, line 3, "the with gain" should read --the signal with gain--.

As per claim 49, line 1, "system of claim 49" should read --system of claim 44--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-110 are rejected under 35 U.S.C. 102(e) as being anticipated by Ertem et al (USP 6,453,289) (hereinafter "Ertem").

Regarding **claim 1**, in accordance with Ertem reference entirety, Ertem discloses a method of controlling gain applied to a signal, comprising:

applying gain to the signal (Fig. 6; element 82 and col. 6, lines 30-32);

estimating a characteristic of the with gain (Fig. 6; element 20 and col. 8, lines 21-23); and

selectively coupling one of the signal and the signal with gain to an output depending on the estimated characteristic (Fig. 6; element 30 and col. 6, lines 32-36).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Ertem further discloses wherein the characteristic comprises power level (col. 8, "spectral magnitude" or equations cited thereinafter).

Regarding **claim 3**, in addition to features recited in base claim 2 (see rationales discussed above), Ertem further discloses wherein the signal is selectively coupled to the output when the estimated power level of the signal with gain is above a clipping threshold (col. 5, lines 1-19).

Regarding **claim 4**, in addition to features recited in base claim 3 (see rationales discussed above), Ertem further discloses wherein the power level estimation comprises averaging the power level for a period of time (col. 10, line 6 and thereinafter).

Regarding **claim 5**, in addition to features recited in base claim 4 (see rationales discussed above), Ertem further discloses (col. 6, line 37 to col. 7, line 20) wherein the power level estimation further comprises estimating a second power level by averaging the power level of the signal with gain for a second period of time longer than the period of time (Fig. 6; elements 76 and 78), the method further comprising adjusting the gain applied to the signal as a function of the second estimated power level (Fig. 6; elements 80 and 82).

Regarding **claim 6**, in addition to features recited in base claim 5 (see rationales discussed above), Ertem further discloses peak tracking the second estimated power level, wherein the gain adjustment is a function of the tracked peak (Fig. 6; element 76 and col. 7, lines 2-21).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), Ertem further discloses wherein the gain adjustment comprises changing a rate of gain adjustment as a function of the tracked peak (Fig. 6; element 78 and col. 6, line 58 to col. 7, line 1).

Regarding **claim 8**, in addition to features recited in base claim 7 (see rationales discussed above), Ertem further discloses wherein the rate of gain adjustment, when the second estimated power level is greater than the tracked peak, exceeds the rate of gain adjustment when the second estimated power level is less than the tracked peak (Fig. 6; element 80 and col. 6, lines 51-57).

Regarding **claim 9**, in addition to features recited in base claim 7 (see rationales discussed above), Ertem further discloses wherein the rate of gain adjustment is decreased at about 2-4 dB/sec when a reference value exceeds the clipping threshold, the reference value being a function of the tracked peak (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 2-4 dB/sec decrement is encompassed by equation 3 as $\Delta(k)$, the long term RMS deviation from the nominal level decreased).

Regarding **claim 10**, in addition to features recited in base claim 9 (see rationales discussed above), Ertem further discloses wherein the rate of gain adjustment is decreased at about 0.1-0.3 dB/sec when a reference value is less than the clipping threshold but greater than a predetermined maximum comfort level, the reference value being a function of the tracked peak (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec decrement is encompassed by equation 3 as $\Delta(k)$, the long term RMS deviation from the nominal level decreased).

Regarding **claim 11**, in addition to features recited in base claim 7 (see rationales discussed above), Ertem further discloses wherein the rate of gain adjustment is logarithmically increased at about 0.1-0.3 dB/sec when a reference value is below a predetermined minimum comfort level and above a noise floor, the reference value being a function of the tracked peak (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec increment is encompassed by equation 3 as $\Delta(k)$, the long term RMS deviation from the nominal level increased).

Regarding **claim 12**, in accordance with Ertem reference entirety, Ertem discloses a method of controlling gain applied to a signal, comprising:

applying gain to the signal (Fig. 6; element 82 and col. 6, lines 30-32);

estimating a characteristic of the with gain (Fig. 6; element 20 and col. 8, lines 21-23);

peak tracking the estimated characteristic (Fig. 6; element 76);

generating a reference value as a function of the tracked peak (Fig. 6; element 78); and

adjusting the gain applied to the signal as a function of the reference value (Fig. 6; element 80).

Regarding **claim 13**, in addition to features recited in base claim 12 (see rationales discussed above), Ertem further discloses wherein the characteristic comprises power level (col. 8, "spectral magnitude" or equations cited thereinafter).

Regarding **claim 14**, in addition to features recited in base claim 13 (see rationales discussed above), Ertem further discloses wherein the power level estimation

comprises averaging the power level for a period of time (col. 10, line 6 and thereinafter).

Regarding **claim 15**, in addition to features recited in base claim 14 (see rationales discussed above), Ertem further discloses (col. 6, line 37 to col. 7, line 20) wherein the power level estimation further comprises estimating a second power level by averaging the power level of the signal with gain for a second period of time longer than the period of time (Fig. 6; elements 76 and 78), the method further comprising selectively coupling one of the signal and the signal with gain to an output depending on the second estimated power level of the signal with gain (Fig. 6; element 30 and col. 6, lines 31-36).

Regarding **claim 16**, in addition to features recited in base claim 15 (see rationales discussed above), Ertem further discloses wherein the signal is selectively coupled to the output when the estimated power level of the signal with gain is above a clipping threshold (col. 5, lines 1-19).

Regarding **claim 17**, in addition to features recited in base claim 13 (see rationales discussed above), Ertem further discloses wherein a rate of change of an amplitude of the reference value, when the power level is greater than the tracked peak, exceeds the rate of change of the amplitude of the reference value when the estimated power level is less than the tracked peak (col. 7, lines 2-20).

Regarding **claim 18**, in addition to features recited in base claim 13 (see rationales discussed above), Ertem further discloses wherein the rate of gain adjustment is decreased at about 2-4 dB/sec when a reference value exceeds the

clipping threshold (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 2-4 dB/sec decrement is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level decreased).

Regarding **claim 19**, in addition to features recited in base claim 18 (see rationales discussed above), Ertem further discloses wherein the rate of gain adjustment is decreased at about 0.1-0.3 dB/sec when a reference value is less than the clipping threshold but greater than a predetermined maximum comfort level (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec decrement is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level decreased).

Regarding **claim 20**, in addition to features recited in base claim 13 (see rationales discussed above), Ertem further discloses wherein the rate of gain adjustment is logarithmically increased at about 0.1-0.3 dB/sec when a reference value is below a predetermined minimum comfort level and above a noise floor (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec increment is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level increased).

Regarding **claim 21**, in addition to features recited in base claim 13 (see rationales discussed above), Ertem further discloses wherein the signal with gain comprises first and second plurality of samples, the first samples preceding the second simples in time, and the reference value generation comprises not changing the

reference value if the estimated power level for the second samples exceeds the estimated power level for the first samples by a threshold (col. 7, lines 27-53).

Regarding **claim 22**, in accordance with Ertem reference entirety, Ertem shows a signal conditioner (Fig. 6) for adjusting gain applied to a signal, comprising:

a combiner to apply gain to the signal (Fig. 6; element 82 and col. 6, lines 30-32);

an estimator to estimate a characteristic of the with gain (Fig. 6; element 20 and col. 8, lines 21-23); and

a bypass to selectively coupling one of the signal and the signal with gain to an output of the signal conditioner based on the estimated characteristic (Fig. 6; element 30 and col. 6, lines 32-36).

Regarding **claim 23**, in addition to features recited in base claim 22 (see rationales discussed above), Ertem further discloses wherein the characteristic comprises power level (col. 8, "spectral magnitude" or equations cited thereinafter).

Regarding **claim 24**, in addition to features recited in base claim 23 (see rationales discussed above), Ertem further discloses wherein the signal is selectively coupled to the output of the signal conditioner when the estimated power level of the signal with gain is above a clipping threshold (col. 5, lines 1-19).

Regarding **claim 25**, in addition to features recited in base claim 24 (see rationales discussed above), Ertem further discloses wherein the estimator estimates the power level by averaging the power level for a period of time (col. 10, line 6 and thereinafter).

Regarding **claim 26**, in addition to features recited in base claim 25 (see rationales discussed above), Ertem further discloses (col. 6, line 37 to col. 7, line 20) wherein the estimator estimates a second power level by averaging the power level of the signal with gain for a second period of time longer than the period of time (Fig. 6; elements 76 and 78), the signal conditioner further comprising a gain calculator (80) that calculate the gain to be applied to the signal based on the second estimated power level of the signal with gain (Fig. 6; elements 80 and 82).

Regarding **claim 27**, in addition to features recited in base claim 26 (see rationales discussed above), Ertem further discloses a peak tracker that tracks the second estimated power level peak and outputs a reference value based on the tracked peak, the gain calculator calculating the gain to be applied to the signal based on the reference value (Fig. 6; elements 76, 78 and 80 and col. 6, line 38 to col. 7, line 21).

Regarding **claim 28**, in addition to features recited in base claim 27 (see rationales discussed above), Ertem further discloses wherein the peak tracker increases an amplitude of the reference value at a first rate when the second estimated power level of the signal with gain is greater than the reference value, and decreases the amplitude of the reference value at a second rate when the second estimated power level of the signal is less than the reference value, the first rate being faster than the second rate (col. 7, lines 2-20).

Regarding **claim 29**, in addition to features recited in base claim 27 (see rationales discussed above), Ertem further discloses wherein the gain calculator

changes a rate of adjustment of the gain applied to the signal as a function of the reference value (Fig. 6; element 80 and col. 6, lines 51-57).

Regarding **claim 30**, in addition to features recited in base claim 26 (see rationales discussed above), Ertem further discloses wherein the gain calculator decrements the gain applied to the signal at a rate of about 2-4 dB/sec when the reference value exceeds the clipping threshold. (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 2-4 dB/sec decrement is encompassed by equation 3 as $\Delta(k)$, the long term RMS deviation from the nominal level decreased).

Regarding **claim 31**, in addition to features recited in base claim 30 (see rationales discussed above), Ertem further discloses wherein the gain calculator decrements the gain applied to the signal at a rate of about 0.1-0.3 dB/sec when the reference value is less than the clipping threshold but greater than a predetermined maximum comfort level. (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec decrement is encompassed by equation 3 as $\Delta(k)$, the long term RMS deviation from the nominal level decreased).

Regarding **claim 32**, in addition to features recited in base claim 29 (see rationales discussed above), Ertem further discloses wherein the gain calculator logarithmically increases the gain applied to the signal at a rate of about 0.1-0.3 dB/sec when the reference value is below a predetermined minimum comfort level and above a noise floor. (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec increment is encompassed by equation 3 as $\Delta(k)$, the long term RMS deviation from the nominal level increased).

Regarding **claim 33**, in accordance with Ertem reference entirety, Ertem discloses a signal conditioner (Fig. 6) for adjusting gain applied to a signal, comprising:

a combiner to apply gain to the signal (Fig. 6; element 82 and col. 6, lines 30-32);

an estimator which estimates a characteristic of the with gain (Fig. 6; element 20 and col. 8, lines 21-23);

a peak tracker that tracks the estimated characteristic peak (Fig. 6; element 76) and generates a reference value as a function of the tracked peak (Fig. 6; element 78); and

a gain calculator that calculates the gain applied to the signal as a function of the reference value (Fig. 6; element 80).

Regarding **claim 34**, in addition to features recited in base claim 33 (see rationales discussed above), Ertem further discloses wherein the characteristic comprises power level (col. 8, "spectral magnitude" or equations cited thereinafter).

Regarding **claim 35**, in addition to features recited in base claim 34 (see rationales discussed above), Ertem further discloses wherein the estimator estimates the power level by averaging the power level of the signal with gain over a period of time (col. 10, line 6 and thereinafter).

Regarding **claim 36**, in addition to features recited in base claim 35 (see rationales discussed above), Ertem further discloses (col. 6, line 37 to col. 7, line 20) wherein the estimator estimates a second power level by averaging the power level of the signal with gain over a second period of time shorter than the period of time, the signal conditioner further comprising a bypass (30) to selectively couple one of the

signal (input from 20) and the signal with gain (input from VAD) to an output of the signal conditioner as a function of the second estimated power level of the signal with gain (Fig. 6; element 30 and col. 6, lines 31-36).

Regarding **claim 37**, in addition to features recited in base claim 36 (see rationales discussed above), Ertem further discloses wherein the bypass couples the signal with gain to the output of the signal conditioner when the second estimated power level of the signal with is below a clipping threshold (col. 5, lines 1-19).

Regarding **claim 38**, in addition to features recited in base claim 34 (see rationales discussed above), Ertem further discloses wherein the peak tracker increases an amplitude of the reference value at a first rate when the estimated power level of the signal with gain is greater than the reference value, and decreases the amplitude of the reference value at a second rate when the estimated power level of the signal with gain is less than the reference value, the first rate being faster than the second rate (col. 7, lines 2-20).

Regarding **claim 39**, in addition to features recited in base claim 33 (see rationales discussed above), Ertem further discloses wherein the gain calculator changes a rate of gain adjustment as a function of the reference value (Fig. 6; element 80 and col. 6, lines 51-57).

Regarding **claim 40**, in addition to features recited in base claim 39 (see rationales discussed above), Ertem further discloses wherein the gain calculator decrements the gain applied to the signal at a rate of about 2-4 dB/sec when the reference value exceeds the clipping threshold. (Fig. 6; element 80 and col. 6, lines 51-

57. Note that the 2-4 dB/sec decrement is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level decreased).

Regarding **claim 41**, in addition to features recited in base claim 40 (see rationales discussed above), Ertem further discloses wherein the gain calculator decrements the gain applied to the signal at a rate of about 0.1-0.3 dB/sec when the reference value is less than the clipping threshold but greater than a predetermined maximum comfort level. (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec increment is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level increased).

Regarding **claim 42**, in addition to features recited in base claim 39 (see rationales discussed above), Ertem further discloses wherein the gain calculator logarithmically increases the gain applied to the signal at a rate of about 0.1-0.3 dB/sec when the reference value is below a predetermined minimum comfort level and above a noise floor (col. 7, lines 27-53).

Regarding **claim 43**, in addition to features recited in base claim 33 (see rationales discussed above), Ertem further discloses wherein the combiner comprises a multiplier (Fig. 6; element 82).

Regarding **claim 44**, in accordance with Ertem reference entirety, Ertem discloses a data transmission system (Fig. 6), comprising:

a telephony device which outputs a signal (Fig. 6; element 34); and

a signal processor comprising a combiner to apply gain to the signal, an estimator to estimate a characteristic of the signal with gain, and a bypass to selectively

couple one of the signal and the signal with gain to an output of the signal processor based on the estimated characteristic (Fig. 6; elements 74, 64, 60, 32, 38, 84, 20 and 30) (col. 6, line 22 to col. 7, line 53).

Regarding **claim 45**, in addition to features recited in base claim 44 (see rationales discussed above), Ertem further discloses wherein the characteristic comprises power level (col. 8, "spectral magnitude" or equations cited thereinafter).

Regarding **claim 46**, in addition to features recited in base claim 45 (see rationales discussed above), Ertem further discloses wherein the bypass couples the signal with gain to the output of the signal processor when the estimated power level of the signal with gain is below a clipping threshold (col. 5, lines 1-19).

Regarding **claim 47**, in addition to features recited in base claim 46 (see rationales discussed above), Ertem further discloses wherein the estimator estimates the power level by averaging the power level of the signal for a period of time (col. 10, line 6 and thereinafter).

Regarding **claim 48**, in addition to features recited in base claim 47 (see rationales discussed above), Ertem further discloses wherein the estimator estimates a second power level by averaging the power level of the signal for a second period of time longer than the period of time (Fig. 6; elements 76 and 78), the signal processor further comprises a gain calculator that calculates the gain to be applied to the signal based on the second estimated power level of the signal with gain (Fig. 6; elements 80 and 82).

Regarding **claim 49**, in addition to features recited in base claim 44 (see rationales discussed above), Ertem further discloses wherein the signal processor further comprises a peak tracker that tracks the second estimated power level peak and outputs a reference value based on the tracked peak (Fig. 6; element 76), the gain calculator calculating the gain to be applied to the signal based on the reference value (Fig. 6; element 80).

Regarding **claim 50**, in addition to features recited in base claim 49 (see rationales discussed above), Ertem further discloses wherein the peak tracker increases an amplitude of the reference value at a first rate when the second estimated power level of the signal with gain is greater than the reference value, and decreases the amplitude of the reference value at a second rate when the second estimated power level of the signal is less than the reference value, the first rate being faster than the second rate (col. 6, line 58 to col. 7, line 20).

Regarding **claim 51**, in addition to features recited in base claim 49 (see rationales discussed above), Ertem further discloses wherein the gain calculator changes a rate of adjustment of the gain applied to the signal as a function of the reference value (col. 6, lines 51-57).

Regarding **claim 52**, in addition to features recited in base claim 51 (see rationales discussed above), Ertem further discloses wherein the gain calculator decrements the gain applied to the signal at a rate of about 2-4 dB/sec when the reference value exceeds the clipping threshold (Fig. 6; element 80 and col. 6, lines 51-

57. Note that the 2-4 dB/sec decrement is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level decreased).

Regarding **claim 53**, in addition to features recited in base claim 52 (see rationales discussed above), Ertem further discloses wherein the gain calculator decrements the gain applied to the signal at a rate of about 0.1-0.3 dB/sec when the reference value is less than the clipping threshold but greater than a predetermined maximum comfort level (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec decrement is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level decreased).

Regarding **claim 54**, in addition to features recited in base claim 51 (see rationales discussed above), Ertem further discloses wherein the gain calculator logarithmically increases the gain applied to the signal at a rate of about 0.1-0.3 dB/sec when the reference value is below a predetermined minimum comfort level and above a noise floor (Fig. 6; element 80 and col. 6, lines 51-57. Note that the 0.1-0.3 dB/sec decrement is encompassed by equation 3 as Δ(k), the long term RMS deviation from the nominal level decreased).

Regarding **claim 55**, in addition to features recited in base claim 44 (see rationales discussed above), Ertem further discloses wherein the telephony device comprises a telephone (not shown; inherent there is a telephone connected to element 34 of Fig. 6)

Regarding **claim 56**, in addition to features recited in base claim 44 (see rationales discussed above), Ertem further discloses further comprising a public

switched telephone network coupled between the telephony device and the signal processor (not shown; inherent there is a PSTN connected to element 34 of Fig. 6).

Claims 57-110 are explicitly and inherently rejected by the same rationales applied to claims 1-56 as discussed above.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eryilmaz (USP 5,867,574).

Bhattacharya (USP 6,169,971).

Marouf et al (USP 4,499,578).

Basbug et al, ROBUST VOICE ACTIVITY DETECTION FOR DTX OPERATION OF SPEECH CODERS, IEEE, pages 58-60, 1999.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (571) 272-3164. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank Duong
Examiner
Art Unit 2666

September 10, 2004